



Life Sciences

USD 2335a

A close-up photograph of a SUPRAdisc HP Depth Filter Module. The module is a circular, white, pleated disc with a central white plastic fitting. It is shown in a stack, with the top disc in sharp focus and the ones below it blurred. The background is a soft-focus, light blue and white pattern.

SUPRAdisc™ HP Depth Filter Modules
For High Performance Cell Clarification

Filtration. Separation. Solution.™

SUPRAdisc HP Depth Filter Modules

For High Performance Cell Clarification

Pall® SUPRAdisc HP modules include two full thickness, graded, high efficiency, depth filter layers in combination. This technology enhances process clarification steps such as whole cell and cell lysate separations.

Difficult to filter processes such as centrifuge supernatants and culture media can also benefit from Pall's SUPRAdisc HP technology. HP depth filter media is comprised of 2 distinct layers of Seitz® P-series depth filter sheets, a more permeable layer followed by a less permeable layer. These performance-enhanced depth filters have been designed for low viability and applications containing high solids. With many new processes containing higher debris loads and with the wider distribution of particle sizes in biotech applications, conventional depth filter technology may no longer achieve desired performance. Pall SUPRAdisc HP depth filters provide the robustness and performance for current process demands.

Features and Benefits

- Designed to provide maximum throughput for biological, bioprocess and pharmaceutical filtration
- High purity pharmaceutical grade depth filter media, optimized for low endotoxins and low extractables levels
- High dirt holding capacity combined with very low protein adsorption and long service life
- Excellent removal of a wide range of suspended particles down to sub-micron size in a wide range of cell culture applications. SUPRAdisc HP modules ensure high protection for subsequent sterile filters as well as chromatography columns
- Compress clarification processing steps to save time and resources and to reduce operating costs
- All components meet the specifications for the biological test listed in the current version of the USP Class VI 121 °C
- SUPRAdisc HP modules and all their components are fully traceable
- Available in SUPRAcap™ 100 and 200 encapsulated formats for applications that require disposable formats
- Validation guide available Pall publication USTR 2404.

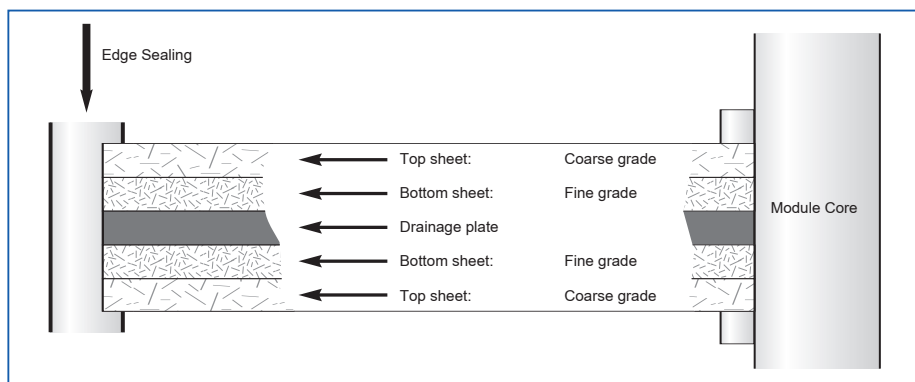
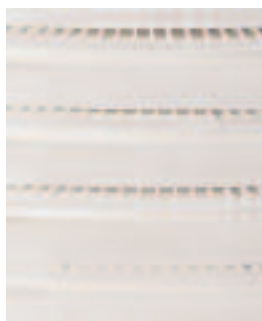


Figure 1: Filter cell design of Pall SUPRAdisc HP module

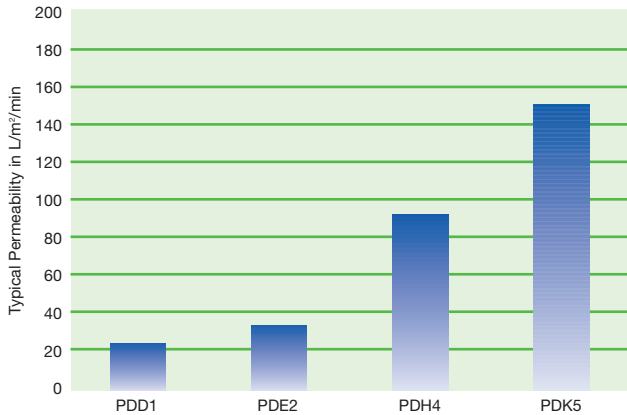
Selection of Pall SUPRAdisc HP media

Media Type	Description	Application
PDK5	Highest dirt holding capacity	Post Fermentation
PDH4	High dirt holding capacity and good membrane protection	Post Fermentation
PDE2	Excellent membrane protection	Post Centrifuge
PDD1	Tightest media combination, outstanding membrane protection	Post Centrifuge/Post TFF

SUPRADisc HP Depth Filter Modules

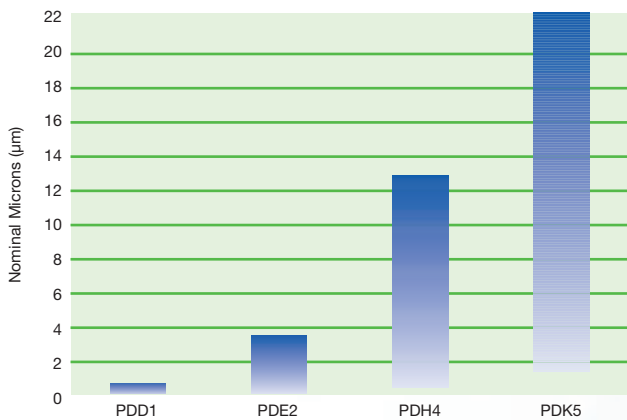
For High Performance Cell Clarification

Permeability – SUPRADisc HP¹



¹ Test performed with water at 20 °C (68 °F) and a differential pressure of 1 bard (14.5 psid)

Micron Range – SUPRADisc HP



The filter sheets meet the specifications set forth in the US Code of Federal Regulations Title 21, parts 177.2260 e,f,g,h,i,j,k,l. The materials for all plastic components are listed in US Code of Federal Regulations Title 21, part 177.1520. With regard to food law conformity, the manufacture of depth filter sheets is also subject to ongoing analysis by the German ISEGA Forschungs- und Untersuchungsgesellschaft mbH, Aschaffenburg.

Technical Service

For best possible results and maximum reliability, Pall recommends performing filter evaluations utilizing your process and process conditions. Pall specialists can provide valuable assistance, either at your facility or in our SLS (Scientific and Laboratory Services) laboratories. Pall offers hands-on assistance and places its extensive technical resources at your disposal in the form of worldwide technical advice, including cost-reduction programs, process review and problem solving.



SUPRADisc HP Depth Filter Modules

Technical Specifications and Ordering Information

Typical Values for Ions after Rinsing with 100 L/m² WFI

Ca	Mg	Fe	Cu	Al	Ni
< 0.5 ppm	< 0.1 ppm	< 0.1 ppm	< 0.1 ppm	< 0.05 ppm	< 0.01 ppm

Operating Characteristics*

Maximum Operating Temperature	80 °C (176 °F)
Maximum Differential Pressure	2.4 bard (35 psid)

* With compatible fluids, which do not soften, swell or adversely affect the products or its material of construction.

Plastic Parts of Construction

Molded Parts	Polypropylene
O-rings	Platinum-cured Silicone elastomer

Sterilization

Steam In Place	125 °C (257 °F) for 30 minutes at 0.3 bard (4.3 psid) maximum
----------------	---

Nominal Dimensions

Diameter	284 mm (12 in.) in 210 configuration
	410 mm (16 in.) in 410 and 420 configuration
Filter Area	1.0 m ² (11 ft ²) in 210 configuration
	2.5 m ² (27.0 ft ²) in 410 and 420 configuration
Total Length	
Double O-ring Style	332 mm (13 in.)
Flat Gasket Style	272 mm (11 in.)

For regulatory and validation information please refer to the following documents; Pall publication USTR 2366 (Pall P-series Depth Filter Media) and USTR 2404 (Pall **SUPRADisc** HP Depth Filter Media).

Furthermore the following documents are available:

- Technical Data Sheet
- Certificate of Analysis available on request
- EU Safety Data Sheet.

Important Note:- Use of this product in a manner other than in accordance with Pall's current recommendations may lead to injury or loss. Pall cannot accept liability for such injury or loss. Because of developments in technology, these data and/or procedures are subject to continual review and update. Please contact Pall for additional information.

Filter Media Specifications

Code	Depth Filter Type	Typical Water in Permeability L/min/m ² @ Δp 1 bar (14.5 psid)	Nominal Retention Rating in μm	Ash Content in %	Endotoxin Level in EU/ml before Rinsing
PDD1	PDD1	25	0.1 - 0.85	52	<0.06
PDE2	PDE2	35	0.2 - 3.5	47	<0.06
PDH4	PDH4	93	0.5 - 15.0	45	<0.06
PDK5	PDK5	151	1.5 - 20.0	45	<0.06

Ordering Information

Pall Part Number:										
Code	Design	Filter Type	Code	Adapter	Code	Filter Area	Code	Gasket Material	Code	Plastic Parts
200	SUPRADisc II HP	Insert code from depth filter type table above	S	Double O-ring	210 ⁽¹⁾	1.0 m ² (10.6 ft ²)	S	Platinum cured Silicone elastomer	P	Polypropylene
300	SUPRADisc I HP		C	Flat gasket	410 ⁽¹⁾	2.5 m ² (26.5 ft ²)		Other gaskets available on request.		
					420 ⁽²⁾	2.5 m ² (26.5 ft ²)				

⁽¹⁾ SUPRADisc I HP only

⁽²⁾ SUPRADisc II HP only



Life Sciences

New York - USA

+1 516 484 5400 phone

+1 516 801 9548 fax

pharmafilter@pall.com e-mail

Portsmouth - Europe

+44 (0)23 9230 3303 phone

+44 (0)23 9230 2506 fax

BioPharmUK@europe.pall.com e-mail

Filtration. Separation. Solution.sm

Visit us on the web at www.pall.com/biopharmaceutical

Pall Corporation has offices and plants throughout the world in locations including: Argentina, Australia, Austria, Belgium, Brazil, Canada, China, France, Germany, India, Indonesia, Ireland, Italy, Japan, Korea, Malaysia, Mexico, the Netherlands, New Zealand, Norway, Poland, Puerto Rico, Russia, Singapore, South Africa, Spain, Sweden, Switzerland, Taiwan, Thailand, United Kingdom, the United States and Venezuela. Distributors are located in all major industrial areas of the world.

Pall, Seitz, SUPRADisc and SUPRACap are trademarks of Pall Corporation. Filtration, Separation, Solution, is a service mark of Pall Corporation.

Part Numbers quoted above are protected by the Copyright of Pall Corporation.

® indicates a trademark registered in the USA.

© 2007, Pall Corporation.